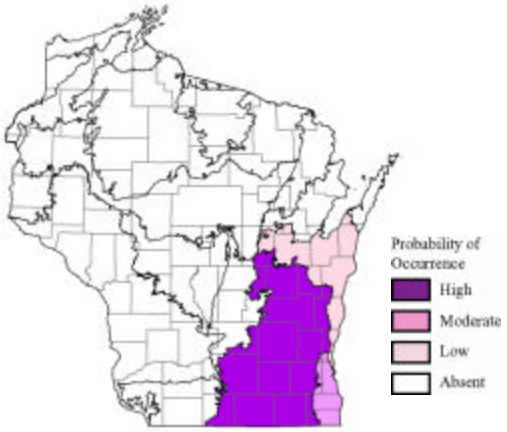
Queen Snake (*Regina septemvittata*)

Species Assessment Scores*

State rarity:	5
State threats:	5
State population trend:	5
Global abundance:	4
Global distribution:	4
Global threats:	4
Global population trend:	3
Mean Risk Score:	4.3
Area of importance:	2

* Please see the Description of Vertebrate Species Summaries (Section 3.1.1) for definitions of criteria and scores.



Ecological Landscape Associations
Please note that this is not a range map. Shading does not imply that the species is present throughout the Landscape, but represents the probability that the species occurs somewhere in the Landscape.

Landscape -community Combinations of Highest Ecological Priority

Ecological Landscape	Community
Central Lake Michigan Coastal	Warmwater rivers
Southeast Glacial Plains	Emergent marsh
Southeast Glacial Plains	Impoundments/Reservoirs
Southeast Glacial Plains	Inland lakes
Southeast Glacial Plains	Shrub-carr
Southeast Glacial Plains	Southern sedge meadow
Southeast Glacial Plains	Submergent marsh
Southeast Glacial Plains	Warmwater rivers
Southeast Glacial Plains	Warmwater streams
Southeast Glacial Plains	Wet prairie
Southern Lake Michigan Coastal	Warmwater streams

Threats and Issues

- Net impacts of climate change are unclear for this species – they may respond positively to warmer climate, but negatively to drier climate.
- Agricultural runoff and associated siltation and turbidity threaten this species. Siltation has buried a great deal of habitat and smothered the crayfish this species depends on for food.
- The queen snake is a shoreline-dependent species, threatened by loss and degradation of riparian habitats. Clearing of streams to the bank, and natural succession along rivers and streams, has eliminated much of their terrestrial habitat.
- Since it is likely that this species utilizes crayfish burrows for hibernation, reed canary grass, a non-native invasive plant, may limit hibernaculum availability. This may be one of the reasons queen snakes are now using artificial structures as hibernacula in some instances.
- Primary production preempted by invasive species such as zebra mussels could crash crayfish populations.

- Nutrient loading and subsequent eutrophication is suspected to reduce crayfish densities, their primary prey.
- Siltation and pollution from agriculture runoff (manure, fertilizers, and various other chemicals) and roadways (salt, oil) are the two major pollution threats to the occupied stream habitats.
- Loss of hibernacula threatens this species, as the only known sites occur in deteriorating manmade structures (dams, bridge abutments).

Priority Conservation Actions

- Permanent protection of riparian habitats that support this species is needed to preserve habitats and increase restoration potential.
- Restoration and management of suitable riparian habitats is needed, including the control of invasive plants.
- Increase protection of lands adjacent to navigable waterways (buffers) to help improve in-stream conditions (improve water quality, clarity, and reduce sediment loading).
- Better regulation of (and incentives for reducing) agricultural runoff is needed to improve aquatic habitat for this species.
- Major strides in policy and education are needed to ensure that wildlife habitat is adequately represented and considered in zoning and planning decisions.
- Increased efforts are needed to educate riparian landowners about the benefits of buffers along waterways.
- Long term monitoring is needed to evaluate population status and track trends of all remaining populations.
- Research is needed into life history and population viability of this species.
- Implement "in perpetuity" riparian protection and enhancement incentive programs.
- Partnerships with local universities and colleges are needed to conduct needed research for this species.
- Continue to support and work with the Natural Resources Conservation Service on projects that protect watersheds and improve stream habitat and water quality.
- Hibernacula in structures must be protected rather than replaced by future construction.